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UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

Ship finance for developing countries

Report by the UNCTAD secretariat

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INTRODUCTION

(i) The Standing Committee on Developing Services Sectors: Fostering Competitive Services Sectors in Developing Countries: Shipping, in its work programme requested the secretariat to study prevailing ship financing arrangements and consider their adequacy in meeting the requirements of developing countries and countries in transition from central planning.

(ii) In September 1992, the secretariat issued a document entitled "Ship finance for developing countries" (UNCTAD/SHIP/642), which established the requirements and availability of different types of financing arrangements for shipowners in developing countries. While this document has been widely circulated among governments and industry circles, the Standing Committee at its second session did not have the opportunity to consider its findings. Consequently, this report should be considered in conjunction with the previous report on ship financing. It mainly covers new developments that have occurred since late 1992 and their impact on the availability of ship financing for developing countries.

(iii) This report consists of four chapters. Chapter I updates the supply and demand situation for the world fleet. Chapter II focuses on the types and sources of finance for acquisition of ships and contains a review of cost structures, global ship capital markets, an estimate of capital requirements for developing countries and countries in transition and freight rate markets' effect on the ability to repay debt. Chapter III provides an updated overview of ship-financing sources. Finally, chapter IV presents conclusions and recommendations.

(iv) The information used for this report was obtained from the following sources:

(a) responses to the note sent by the UNCTAD secretariat to the States members of UNCTAD (dated 18 August 1994);

(b) responses to a communication sent by the UNCTAD secretariat to selected commercial banks and ship-mortgage banks;

(c) responses to a communication sent by the UNCTAD secretariat to international and regional development banks and other development finance institutions;

(d) responses to a communication sent by the UNCTAD secretariat to selected shipping companies of developing countries;

(e) additional information obtained from published sources.

The responses have been integrated in the appropriate sections of this study. While a larger number of responses would have provided a better basis for analysis, the available information does provide a useful indication of the main features of ship financing in developing countries and countries in transition from central planning.

(v) The UNCTAD secretariat wishes to acknowledge with gratitude the cooperation of Governments and the various organizations that supplied information in response to the note and the communications.

(vi) Furthermore, it should be noted that in response to paragraph C.13 of the work programme of the Standing Committee at its first session, the secretariat also prepared a report on "Preliminary Aspects of Ship Leasing in Developing Countries" (UNCTAD/SDD/LEG/4).

CONCLUSIONS

(vii) The conclusions from the secretariat's previous report on ship financing (UNCTAD/SHIP/642), issued in September 1992, have not changed. However, new information indicates that the demand for ship financing is increasing. Total ship financing for newbuilding is now estimated to be in excess of \$30.0 billion, largely due to the increasing capacity requirements to meet the expansion in world seaborne trade, to the continuing ageing of the global fleet and to the resulting need to replace technically obsolete tonnage.

(viii) For developing countries and countries in transition, financing requirements for newbuildings and second-hand tonnage are estimated to exceed \$93.3 billion over the 1993-1997 period. These capital requirements will be more difficult to finance because second-hand tonnage usually requires more equity participation than newbuildings, and because the fleet profile for these two country groups consists of many technically obsolete vessels.

(ix) The difficulties for capital markets to meet the growing finance requirements are highlighted by the \$3.9 billion gap between traditional sources of finance and investment needs. The deficit can be attributed to the conditions in the freight markets. Specifically, current time-charter rates barely cover operating costs and are insufficient to contribute fully to debt service (repayment of principal and interest). Low freight prices are caused by a structural imbalance found in most sectors of the shipping industry, as surplus tonnage is in excess of 10 per cent and is expected to remain at about 15 per cent to the end of the century.

(x) This imbalance is exacerbated by government subsidy and protection policies that distort shipping markets. In the short run, these programmes may support domestic economic programmes by stimulating shipbuilding and employment opportunities, but in the long run they contribute to excess shipping capacity and operating inefficiencies that are shielded from more competitive ship operators. This results in a chronic structural imbalance and distorted freight rates.

(xi) Conversely, it is not the capital market mechanisms that are deficient. On the contrary, financial institutions have been innovative in structuring loans and tailoring the main variables (term, balloon payments, moratoria, down payments, etc.) to meet the cash flows of borrowers. Thus, the essential issue is the inability of the shipping industry to compete for the limited pool of global capital that can obtain higher yields from more profitable projects. These conditions can only be redressed by reducing the tonnage imbalance and eliminating promotional policies that distort markets by artificial prices or protectionism.

(xii) The basic economic principles are no different for developing countries and countries in transition, and the demands on the shipping capital market are equally stringent. However, consideration of special conditions for developing countries, possibly along the lines of terms called for in UNCTAD (resolution 121 V),¹ may provide "softer" financing terms and could be applied to viable projects that require more flexible debt service schedules.

¹ UNCTAD Resolution 121 (V) calls for:

- (i) Maximum loan = 90 per cent of the contract price;
- (ii) Fixed interest rate = 5 per cent per annum;
- (iii) Loan repayment period = 14 years for newbuilding, 10 years for second-hand ships;
- (iv) Grace period = three years.

Chapter I

UPDATES TO THE SUPPLY AND DEMAND SITUATION FOR THE WORLD FLEET

The basis for determining ship financing requirements are determined by factors that affect the supply and demand conditions for the world fleet. These topics are briefly reviewed in Chapter 1 and include: seaborne trade forecast; world fleet forecasts; the supply/demand balance of the world fleet; age of the world fleet; deletions; deliveries of newbuildings; and tonnage on order.

A. Trade and fleet forecasts

1. The demand for ship finance is derived from seaborne trade and the need to build shipping capacity. Additions to the world fleet replace obsolete tonnage and provide incremental capacity to meet the demands of the expanding world trade. The forecast for world seaborne trade indicates an annual average growth rate of more than 4 per cent during the 1994-2004 period, with total seaborne trade exceeding 5.5 billion tons by 2004. Oil trades will remain the largest sector, while the fastest growth will be in the container trades. The resulting tanker and container fleet expansion is indicated in graph 1. Fleet capacity requirements to service world seaborne trade are forecast to increase by 28.8 per cent between the years 1994 and 2004. The direct effect on finance will be further demands for capital in global credit markets.

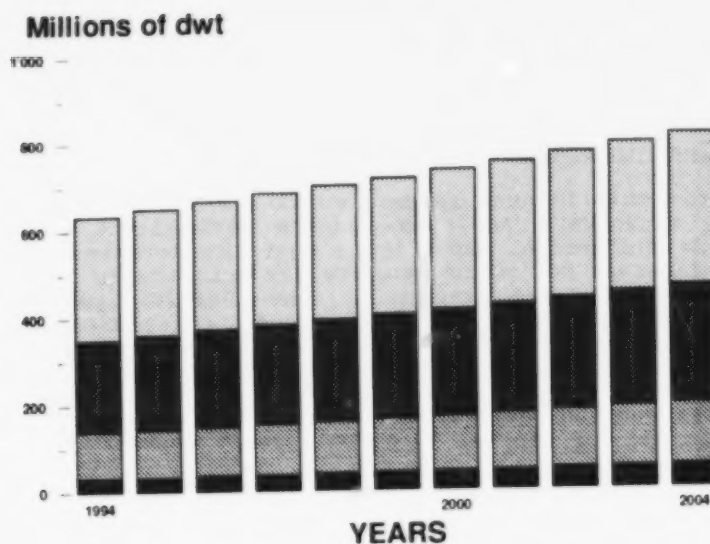
B. Balance between supply and demand

2. The tonnage balance between world supply and demand for shipping capacity not only determines trading prospects but also the volumes of newbuilding. Under conditions of large surplus capacity, shipowners will be reluctant to replace existing vessels. The tonnage oversupply for the world merchant fleet is summarized in table 1. For year-end 1994, 8.8 per cent of the total fleet is surplus, which was well below the peak surplus reached during the 1986-1988 period. However, since 1988, improvement in the overtonnage situation has been slow.

3. Looking to the future (1994-2000), the chronic structural imbalance between total tonnage available and tonnage required is expected to continue. Graph 2 compares the forecasted oversupply situation and indicates that tonnage surplus will be around 15 per cent during this seven-year period. Continuing overcapacity may adversely affect freight markets which in turn may affect the ability of shipowners to generate sufficient cash flow to cover debt-service requirements. If this scenario occurs, lenders will be more selective in granting loans and the net effect may be more stringent financing terms because owners may be required to provide additional security or increase equity participation.

Graph 1

Forecast of world fleet demand



Source: Dri-McGraw-Hill.

Table 1

Tonnage oversupply in the world merchant fleet, 1987-1994
(Million dwt and percentages)

	1987	1988	1989	1990	1991	1992	1993	1994
Million dwt								
World merchant fleet (as at mid-year)	632.3	627.9	638.0	658.4	683.5 c/	694.7 c/	710.6 c/	719.8 c/
Surplus tonnage <u>a/</u>	101.1	83.4	62.3	63.7	64.2	71.7	72.0	63.4
Active fleet <u>b/</u>	531.2	544.5	575.7	594.7	619.3	623.0	638.6	656.4
Percentages								
Surplus tonnage as a percentage of the world merchant fleet	16.0	13.3	9.8	9.7	9.4	10.3	10.1	8.8

Sources: Shipping Information Services of Lloyd's Register of Shipping and Lloyd's of London Press Ltd.; Lloyd's Shipping Economist (London), various issues.

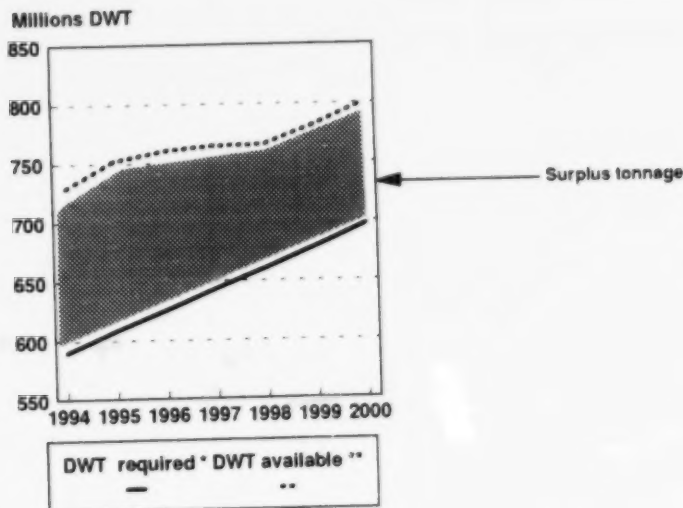
a/ Estimates of average year figures. Surplus tonnage is defined as tonnage which is not fully utilized due to slow steaming, lay-up status or because it is lying idle for other reasons.

b/ World fleet minus surplus tonnage.

c/ Year-end figure.

Graph 2

Total fleet supply/demand, 1994-2000



Source: DRI/McGraw-Hill.

Note: * World fleet requires operating at 90 per cent capacity.
 ** dwt available less scrapping plus newbuildings.

C. Age factors

4. The age of the world merchant fleet is another important factor affecting new ship construction and financing needs. Although ships may have an operating life in excess of 20 to 25 years, economic obsolescence often becomes a factor after 15 years. This occurs because the costs of maintenance and repairs escalate with age, insurance costs are higher and more modern vessels are more competitive in commercial markets. Table 2 provides the age distribution of the world merchant fleet at year-end 1994. The average age for the world is 15.00 years, as compared to 15.05 years in 1993. In the fleets of developing countries and countries in transition, 45.7 per cent of their total fleets is over 15 years old. In short, these ageing fleets will require increasing replacement tonnage over the next five years to retain existing market shares.

D. Deletions from and additions to the world fleet

5. Deletions from the world fleet reduce the supply of tonnage available. Tonnage sold for demolition remains high, with over 20.77 million dwt broken up in 1994. With the exception of the record year, 1986, when 31.2 million dwt was scrapped, the percentage of the world fleet sold for breaking remains at about 2 per cent, rising to 2.9 per cent in 1994. During the 1993 and 1994 period, the tanker sector represented over 60 per cent of the total tonnage sold for demolition.

6. Conversely, delivery of vessels from shipyards and newbuilding contracts add to the present and future supply of world tonnage. For the former, an 18.7 per cent increase over the previous year occurred in 1993. For the latter, newbuilding contracts almost doubled in dwt terms from 1992 to 1993, and by mid-year 1994 over 40 million grt were on order.²

² Institute of Shipping Economics and Logistics (Bremen), 1994, No. 8/9.

Table 2

Age distribution of the world merchant fleet by type of vessel
as at 31 December 1994
 (Percentage of total in terms of dwt)

Country grouping	Type of vessel	Total	0-4 years	5-9 years	10-14 years	15 years and over	Average age (years) ^{a/}	Average age (years) 1993 ^{a/}
World total	All ships	100	15.2	14.7	17.6	52.5	15.00	15.05
	Tankers	100	19.7	11.2	10.3	58.8	15.35	16.86
	Bulk carriers	100	12.1	17.7	23.5	46.7	14.58	13.61
	General cargo	100	7.5	13.0	19.4	60.1	16.61	15.03
	Containerships	100	24.7	21.3	18.4	35.6	12.03	12.82
	All others	100	14.7	16.6	21.6	47.1	14.41	14.14
Developed market-economy countries	All ships	100	14.7	16.3	18.7	50.3	14.75	14.44
	Tankers	100	15.2	10.3	11.3	63.2	16.29	16.65
	Bulk carriers	100	11.4	20.5	26.1	42.0	14.04	12.70
	General cargo	100	12.5	19.6	21.4	46.5	14.42	13.26
	Containerships	100	28.0	19.9	17.1	35.0	11.71	13.07
	All others	100	16.5	20.8	22.0	40.7	13.38	13.17
Major open registry countries ^{b/}	All ships	100	16.1	10.4	14.1	59.4	15.81	15.88
	Tankers	100	23.5	8.5	7.5	60.5	15.28	17.26
	Bulk carriers	100	8.7	10.1	19.9	61.3	16.76	15.22
	General cargo	100	6.0	13.1	20.0	60.9	16.84	14.34
	Containerships	100	26.9	21.5	16.2	35.4	11.78	13.73
	All others	100	16.5	17.1	16.8	49.6	14.46	14.11
Subtotal	All ships	100	15.3	13.8	16.8	54.1	15.19	15.23
	Tankers	100	18.9	9.5	9.6	62.0	15.84	16.89
	Bulk carriers	100	10.2	15.8	23.3	50.7	15.26	14.13
	General cargo	100	9.8	16.9	20.8	52.5	15.43	13.91
	Containerships	100	27.7	20.3	16.9	35.1	11.73	13.32
	All others	100	16.5	19.8	20.6	43.1	13.67	13.55
Countries of Central and Eastern Europe	All ships	100	4.9	15.6	19.2	60.3	16.76	14.87
	Tankers	100	1.0	14.7	23.6	60.7	17.24	14.13
	Bulk carriers	100	5.4	17.1	21.4	56.1	16.22	13.58
	General cargo	100	5.7	14.0	16.0	64.2	17.14	16.20
	Containerships	100	0.0	28.0	33.6	38.4	14.44	11.29
	All others	100	7.0	16.1	15.6	61.3	16.63	15.56
Socialist countries of Asia	All ships	100	7.8	11.5	14.6	66.1	17.26	16.66
	Tankers	100	14.6	10.5	14.5	60.4	16.06	17.38
	Bulk carriers	100	8.7	12.8	15.6	62.9	16.78	16.23
	General cargo	100	3.5	8.8	12.9	74.8	18.69	17.40
	Containerships	100	11.4	25.0	20.5	43.1	13.92	10.54
	All others	100	3.4	4.7	11.4	80.5	19.48	19.04
Developing countries (excluding open-registry countries)	All ships	100	13.5	20.1	19.8	46.6	14.31	14.35
	Tankers	100	16.3	14.2	11.1	58.4	15.50	16.61
	Bulk carriers	100	13.7	31.8	27.1	27.4	11.78	11.12
	General cargo	100	3.4	9.1	17.6	69.9	18.20	16.34
	Containerships	100	31.1	19.7	16.5	32.7	11.18	12.78
	All others	100	13.2	10.3	27.6	48.9	15.06	15.09

Source: Compiled on the basis of data supplied by Lloyd's Maritime Information Services Ltd. (London).

^{a/} To calculate average age, it has been assumed that the ages of vessels are distributed evenly between the lower and upper limit of each age group. For the 15-years-and-over age group, the mid-point has been assumed to be 22 years.

^{b/} Including Malta and Vanuatu.

BoxMaritime sector driven by supply

Lloyd's Maritime has carried out research to determine the major factors that influence the marine sector. Although the conventional theory is that the industry's fortunes follow the general economic cycle, market analysts know that the correlation between economic cycles and freight rates is tenuous. The Lloyd's Maritime work establishes supply as a major driving force in the industry.

The research identifies the main influences in the determination of freight rates by analysing the markets over a 30-year period and by fixing relationships between freight rates, economic growth, shipping supply and shipbuilding prices.

The research assessed the relationship between GDP and total world trade. It shows that the volume of cargo shipped by sea decreases at a time of economic slow-down, but the correlation between the two is less than would be expected. From the analysis it is notable that despite several periods of economic downturn, the supply of tonnage has only decreased in 3 of the last 30 years.

Lloyd's Maritime examined the new construction market to see how this responded to changes in the shipping markets. Owners tend to order in rising markets and have their vessels delivered in falling markets. This is the worse scenario for owners of new vessels, as it is in the first few years of a vessel's life that the highest return on investment is required. The need for cash flow to service loans and capital repayments results in owners operating their older vessels for longer than they would like to in a perfect market. The return on investment required for these vessels to generate positive cash flow is less than that for newbuildings. As the market is dominated by these vessels, they tend to set the market rates.

The conclusion of the detailed analysis is that the shipping markets are supply driven. Freight rates only tend to increase substantially at times when supply and demand come into equilibrium. At such times, additional orders tend to be placed for new tonnage, which leads to yards increasing their prices as the supply of available building capacity tightens. This encourages further orders for concern over long-term increases in building costs and the ability to remain competitive in the future.

As a consequence of a number of related factors, shipping markets have been characterized by longer periods of relatively poor return on investment, with only reasonably short periods of high returns. Lloyd's Maritime has called this the "Heartbeat Theory".

Source: Lloyd's Maritime Information Services Ltd. (London), Review, November 1993.

Chapter II

FINANCIAL IMPLICATIONS

The impact of the trends in world trade and changes in the world merchant fleet have a direct effect on ship financing. These aspects are covered in this chapter with a review of cost structures, global ship capital markets, an estimate of capital requirements for developing countries and countries in transition and freight rate markets' effect on the ability to repay debt.

A. Cost structure

7. The costs of shipping companies are divided into three main elements - capital, operating and voyage costs. Capital charges, consisting of interest charges and principal repayment, are fixed, while operating and voyage costs are variable. Allocation of these fixed and variable costs for developing country vessels are estimated in table 3.

Table 3

Annual cost structure by vessel types
(Millions of US dollars)

	Conventional breakbulk ship (10,000 dwt)	Combination carrier (16,000 dwt)	Container vessel (1,500 TEU)
Annual costs			
Capital	0.9	2.1	6.8
Operations	1.8	2.9	3.3
Voyage	1.6	2.4	3.5
TOTAL	4.3	7.4	13.6
Capital cost as percentage of total	20.9	28.4	50.0

Source: World Bank, Seatrade, Logistics and Transport, 1992.

8. The capital cost proportion varies between 21 per cent for a conventional breakbulk ship to 50 per cent for container vessels. Moreover, these financial costs are ongoing regardless of market conditions or the activity status of the vessel. Therefore, even if the ship is idle or in lay-up, the debt service (interests and principal) will continue until the loan is amortized.

B. Global shipping capital markets

9. The 1990-1997 world demand and supply for shipping capital is summarized in graph 3. Demand (graph 3a) is estimated to be \$29.4 billion by 1997 and will average about \$23.4 billion during the 1994-1997 period. The bulk sectors (tanker and dry) will require the most capital but the cruise market will increase the fastest. The rapid escalation in demand (up over 130 per cent), or 14.9 per cent per annum, places considerable pressure on global capital markets to provide additional finance for shipping.

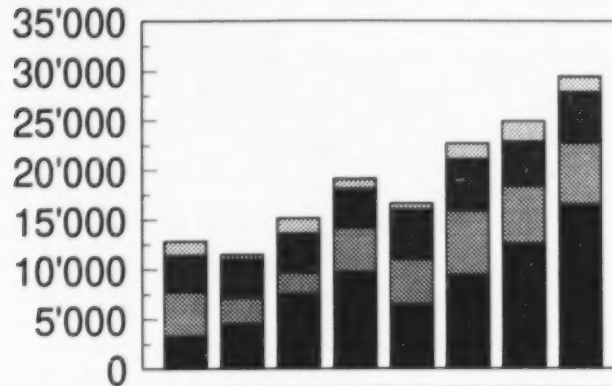
10. The supply of capital (graph 3b) indicates that world capital markets have responded to the rising demand. For example, total capital supplies increased 77.8 per cent from 1990 to 1994. Primary sources of capital come from five principal financial markets: (1) private debt; (2) public equity; (3) public debt; (4) banks; and (5) shipyard credits. Shipyard credits, which are often supported by government assistance and subsidy programmes and banks are the two largest sources. There remains, however, a significant gap between the supply and demand for global shipping capital. Graph 4 illustrates the deficit that is expected to exceed \$3.9 billion by 1997.

Graph 3

Comparison of shipping capital demand and supply

(a) Capital demand by vessel types

\$ millions



	1990	1991	1992	1993	1994	1995	1996	1997
Tankers	3'229	4'543	7'566	9'688	6'446	9'383	12'504	16'497
Dry Bulk Carriers	4'480	2'585	2'166	4'431	4'523	6'508	5'838	6'246
Liners & Misc.	3'640	3'907	3'850	3'940	5'000	5'200	4'520	5'140
Cruise	1'451	418	1'529	1'043	639	1'577	2'075	1'600
Total Demand	12'800	11'453	15'111	19'102	16'608	22'668	24'937	29'483

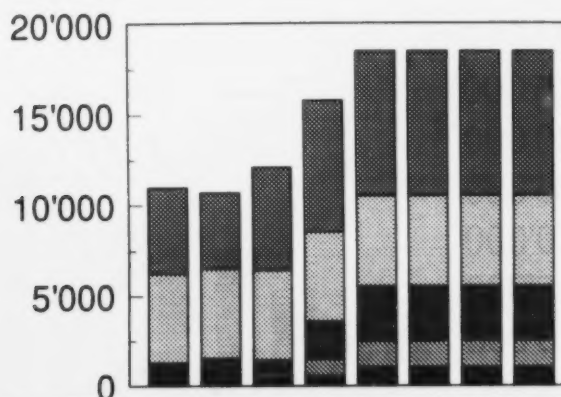
Source: Citicorp Securities, Inc., October 1994.

Note: Figures for 1994-1997 average.

Graph 3 (continued)

(b) Sources of shipping capital

\$ millions



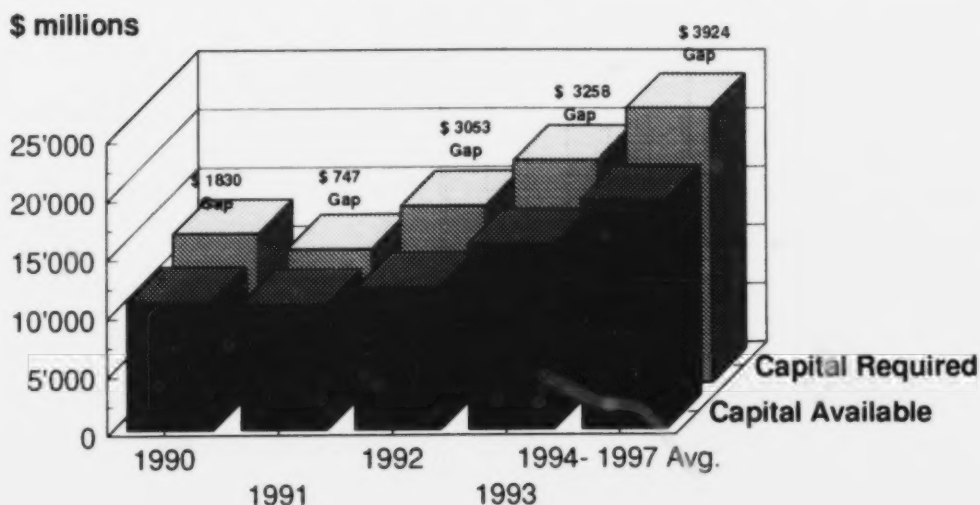
	1990	1991	1992	1993	1994	1995	1996	1997
Private Debt	1'000	1'000	500	500	1'000	1'000	1'000	1'000
Public Equity	200	225	250	993	1'500	1'500	1'500	1'500
Public Debt	50	300	676	2'050	3'000	3'000	3'000	3'000
Banks	5'000	5'000	5'000	5'000	5'000	5'000	5'000	5'000
Shipyards Credit	4'720	4'181	5'653	7'201	8'000	8'000	8'000	8'000
Total Supply	10'970	10'706	12'079	15'744	18'500	18'500	18'500	18'500

Source: Citicorp Securities, Inc., October 1994.

Note: Figures for 1994-1997 average.

Graph 4

Gap in supply and demand for shipping capital



Source: Citicorp Securities, Inc., October 1994.

C. Capital requirements of developing countries and countries in transition

11. Since the previous UNCTAD report entitled "Ship finance for developing countries" (UNCTAD/SHIP/642), new conditions have arisen. The scope of this report is expanded to cover investment requirements in both developing countries and countries in transition. Moreover, market conditions have changed. Most importantly is a decline in shipbuilding prices. For example, the percentage change in 1992-1994 for an 80,000 dwt tanker is down 2.4 per cent, while a handy-size bulk carrier declined 12.5 per cent and a 2,500 TEU containership 18.6 per cent. Conversely, second-hand tonnage prices increased over the 1992-1994 period.

12. In estimating the capital requirements for developing countries and countries in transition, selected assumptions were made. The starting point is the 1993 deadweight by principal ship type. The age profile was then examined and the percentage of vessels over 15 years old were identified as needing replacement within the next 5 years. This deadweight less tonnage already on order determines the newbuilding deadweight requirements and a cost per deadweight ton was applied to each vessel type. However, about 30 per cent of the requirement is purchased in the second-hand market. This option serves to reduce total investment requirements, but additional tonnage to cover trade growth mitigates the decrease in capital required. Table 4 adjusts the total dwt and capital requirements by applying moderate annual average growth factors (5.7 per cent)³ to determine the 1993-1997 requirements apportioning purchases between newbuildings (70 per cent) and second-hand tonnage (30 per cent), and applies current (1994) prices to obtain the \$93 billion investment requirement for the five-year period.

³ Average annual growth for developing countries fleets during 1980-1993 is 7.2 per cent.

Table 4

Total capital requirement for ship acquisitions by developing countries and countries in transition over the 1993-1997 period

Ship type	Tonnage in excess of 15 years old (1993)	1993-1997 total tonnage required (millions dwt)	Investment required for newbuildings (billions US\$)	Investment required for used ships (billions US\$)	Total capital required (billions US\$)
Tankers	33.6	38.2	15.40	2.18	17.58
Bulk carriers	24.7	31.8	9.97	3.30	13.27
General cargo	27.7	33.7	37.11	6.33	43.44
Containerships	1.9	7.0	6.49	1.83	8.32
All others	7.9	9.188	8.88	1.90	10.78
Totals	95.80	119.89	77.85	15.54	93.39

Source: Compiled on the basis of data provided by Lloyd's Maritime Information Services Ltd. (London), Lloyd's Shipping Economist and UNCTAD secretariat calculations.

D. Freight rate markets and the ability to repay debts

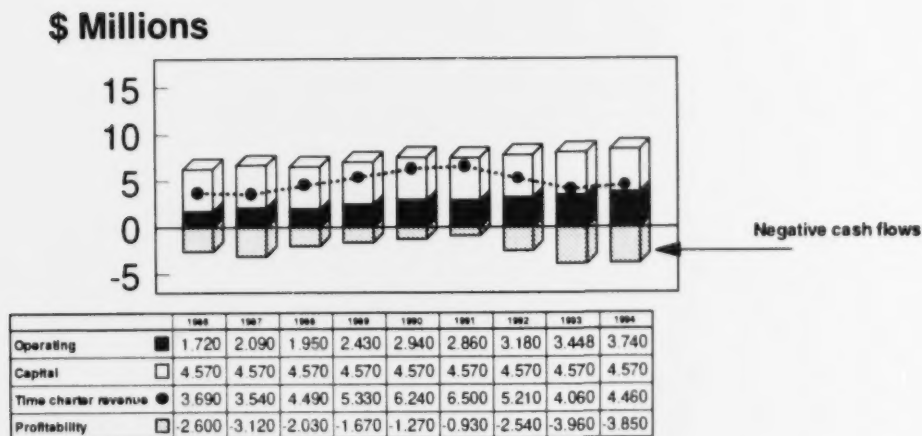
13. The ability to repay principal and interest are a key lending factor. Financial institutions will closely examine estimates of ship project cash flows to determine the financial viability of the investment and debt-service requirements. In practice, this means that the annual revenues less operating costs must provide an operating surplus to cover the capital repayment schedule over the life of the loan.

14. The impact of depressed freight rates is to reduce gross revenues and decrease operating surpluses. This occurs as operating expenses tend to rise with inflation and vessel age and thus margins are squeezed. For example, during the 1986-1992 period, time-charter revenues in the tanker, dry bulk, container and general cargo sectors were only sufficient to meet operating costs and contribute to only a portion of the annual capital repayment needs.

15. Graphs 5 to 8 illustrate the negative cash flows of four representative vessels. In each case, yearly operating costs, annual capital repayment and annual time-charter revenue are compared. The profitability is calculated by deducting operating or capital expenses from the time-charter revenue and the net results are mostly negative cash flows.

Graph 5

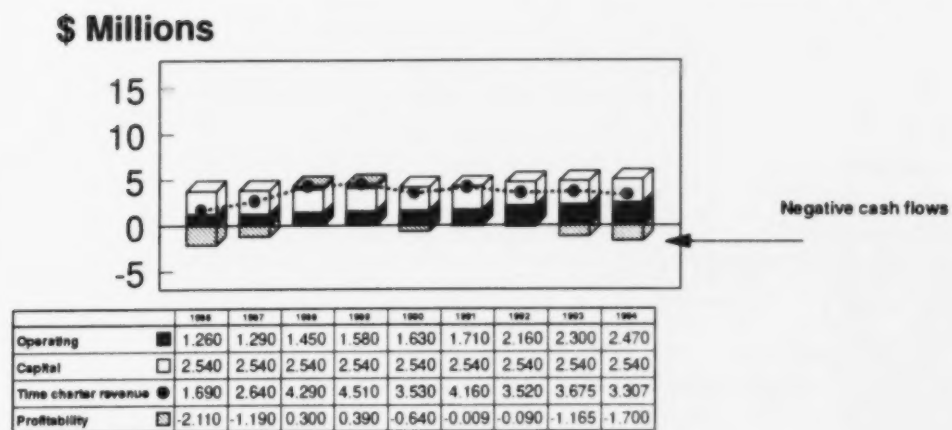
Profitability profile of panamax tanker, 1989-1994



Source: Drewry Shipping Consultants (London), *Shipping in the 1990s*; Lloyd's Shipping Economist, various issues, 1993-1994.

Graph 6

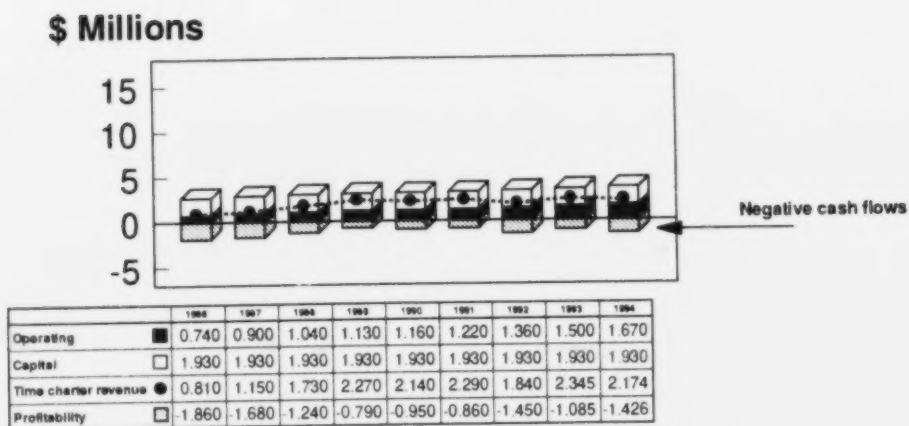
Profitability profile of handy-size bulk carrier, 1989-1994



Source: Drewry Shipping Consultants (London), *Shipping in the 1990s*; Lloyd's Shipping Economist, various issues, 1993-1994.

Graph 7

Profitability profile of general cargo ship 15k dwt, 1989-1994

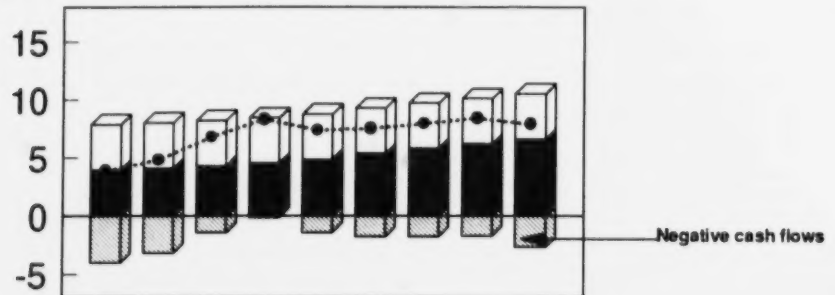


Source: Drewry Shipping Consultants (London), *Shipping in the 1990s*; Lloyd's Shipping Economist, various issues, 1993-1994.

Graph 8

Profitability profile of 2,500 TEU containership, 1989-1994

\$ Millions



	1989	1990	1991	1992	1993	1994
Operating	3.940	4.090	4.300	4.510	4.840	5.340
Capital	3.920	3.920	3.920	3.920	3.920	3.920
Time charter revenue	3.840	4.820	6.780	8.290	7.370	7.500
Profitability	-4.020	-3.190	-1.440	-0.140	-1.390	-1.760

Source: Drewry Shipping Consultants (London), *Shipping in the 1990s*; *Lloyd's Shipping Economist*, various issues, 1993-1994.

16. The implications for ship finance is to limit credit because lenders will carefully examine cash flow projections to ensure that debts can be repaid. Moreover, many lenders will insist on greater equity participation by shipowners. For developing countries and countries in transition, this may increase barriers to fleet expansion because less credit will be available and thus the opportunity to renew their fleets with more competitive and modern tonnage may be denied.

Chapter III

SOURCES AND TECHNIQUES FOR SHIP FINANCE

Chapter III provides an updated overview of ship-financing sources. Additional basic details are found in the previous secretariat report entitled "Ship finance for developing countries" (UNCTAD/SHIP/642). The three topics covered are sources and techniques for financing ships, the role of national governments and development institutions and international banks.

A. Sources and techniques for financing ships

17. To finance the estimated \$93 billion necessary to replace the fleets of developing countries and countries in transition, shipowners have four broad alternatives: equity, senior debt, subordinate debt and leases. Within these categories are several types of finance option, which are summarized in table 5.

18. The structure of the loan will be a mixture of the financing categories. The main variables include: (1) the down payment; (2) the rate of interest; (3) the loan repayment period; and (4) grace periods on interest and capital repayment. The credit-worthiness of the borrower will determine the apportionment of the options. The criteria for determining the credit-worthiness focuses on the ability to repay and is influenced by markets, tonnage, equilibrium between supply and demand, operating costs and public policy.

B. The role of governments and development institutions

19. Government support programmes for the shipping sector include direct and indirect programmes for shipbuilders and shipowning/operating companies. Most of these programmes serve to reduce capital and operating expenditures through grants and subsidies, and enhance the credit-worthiness of the borrowers by reducing the risk to lenders. The latter occurs when commercial loans are guaranteed by governments or when protectionist measures limit competition and the net result is to increase the probability of repayment. A summary of government assistance by country is found in the Annex.

20. The United States Department of Transportation, Maritime Administration's survey (September 1993) indicates that the largest government subsidiary expenditures were direct support to shipyards. Indirect tax benefits through rapid ship depreciation are another fiscal subsidy that is offered by 38 governments. Also, promotional trade agreements are provided by 40 governments.⁴

21. The United States Federal Ship Financing Program (1994) provides a limited opportunity window (until 1996) for developing countries and countries in transition to obtain long-term financing at more favourable rates and conditions than usually found in capital markets. Although the programme primarily aims to promote the United States merchant marine and United States shipyards, benefits can accrue to qualified foreign shipowners. The eligibility requirement for the Title XI of the Merchant Marine Act, 1936 as amended is generally extended to commercial vessels such as passenger, bulkers, cargo, tankers, tugs, towboats, barges, dredges, oceanographic research, pollution abatement, offshore oil and floating dry docks.

⁴ Source: United States Department of Transportation, Maritime Administration, Maritime Subsidies, September 1993.

Table 5

Financing options for merchant ships

Finance category	Type of finance	Typical features
Equity	Owner equity	Finance provided by owner from own funds and retained earnings, accumulated depreciation
	Limited partnership	Funds provided by joint venture partners
	Ship fund shares	Shares in company bought privately by individuals or listed on stock exchange
	Public offering shares	Shares sold by subscription on public stock exchange
Subordinate loan	Private placement	Debts with high interest rates and possibly equity rights
Senior debt	Bond issue	Security issued in the capital market
	Commercial bank loan	Mortgages provided by banks may be syndicated between several banks
	Shipyard credit	Loans provided by governments or agencies to assist domestic shipyards
	Private placement	Debt-finance arrangement privately with pension fund, insurance company, etc.
Lease	Finance lease	Long-term tax-effective finance based on sale of ship to company which uses depreciation benefits; may be leveraged.
	Operating lease	

Source: Indian Shipping, vol.XLVI, Numbers 2-3/1994.

22. The Act permits guarantees in an amount not exceeding 87.5 per cent of the actual cost and the maximum guarantee period is the lesser of 25 years or the remaining economic life of the vessel. Amortization in equal payments of principal is usually required; however, other amortization methods, such as a level debt (equal payments of principal and interest) may also be approved if sufficient security is offered, such as long-term charters, reduction of the amount of guarantee and/or the length of the guarantee period. The interest rate of the obligations guaranteed is determined by the private sector. Generally, in establishing the interest rate, the prospective obligee would utilize as a benchmark rate the interest rate carried by the United States Treasury obligations, comparable to the average life of the proposed debt issue.

23. Other countries also provide financial assistance for shipbuilding. These are mostly developed market-economy countries which produced about two thirds

of the deliveries of newbuildings in 1993.⁵ For example, the OECD agreement on shipbuilding⁶ provides guidelines on export credits for ships. These are important to all countries because about 75 per cent of the world's shipbuilding capacity will be covered by the agreement. Key financing terms, applicable as of 1 January 1996, will be:

- (i) a minimum deposit of 20 per cent of the contract price;
- (ii) a maximum duration of 12 years from delivery;
- (iii) repayment schedule by equal instalments at regular intervals, normally of 6 months and a maximum of 12 months;
- (iv) an interest rate at the commercial interest reference rate.

24. The impact on ship financing will be to reduce competition between governments in providing export credit terms. In practice, this means credit subsidies should be eliminated and competition for shipbuilding orders will focus on prices, quality and delivery times. For developing countries and countries in transition, the ability to negotiate more flexible credit terms may decrease and thus financing options may become more stringent.

25. These limitations, however, may be mitigated because the agreement allows participants to offer more flexible financing terms for "genuine aid reasons".⁷ This exception requires that: (1) the ship not be operated under an open-registry for the duration of the credit; (2) the ship's ultimate owners reside in the country receiving the credit and that the ship is not a non-operational subsidiary of a foreign interest and is not to be sold without government approval. Moreover, eligibility for concessional or aid credit should not be extended if the project is commercially viable on market terms, respectively those of the Understanding (see foot-note 6). There are two criteria for determining aid eligibility and hence an exemption to the agreement: (1) the inability of the project to generate sufficient cash flow to cover operating costs and to service the capital under the terms of the agreement; and (2) is the exclusion of aid credits to countries whose per capita GNP would make them ineligible for 17- or 20-year loans from the World Bank.⁸

C. International and regional banks and financial institutions

26. In updating the previous finance report, replies from the mail survey indicated that only two regional development banks have made some modifications since the last report (1992).

27. The Islamic Development Bank (IDB) stated that their main features of ship financing are:

- 1. The IDB leases new ships as well as second-hand ships up to five years old, but preferably not more than three years old, to shipping companies in member countries.
- 2. The ships are generally financed through leases for a specific period (generally for 8 years) but in any case not more than 10 years. The interest rate for qualified borrowers is 8.5 per cent and the maximum amount of financing is about US\$ 20.0 million.

⁵ UNCTAD, *Review of Maritime Transport*, 1993 (TD/B/CN.4/37).

⁶ OECD, Council Working Party on Shipbuilding, Understanding on Export Credits for Ships (C/WP6(94)6), Paris, 3 October 1994.

⁷ Ibid.

⁸ GNP per capita over \$2,465 in 1990.

3. At the end of the lease period and on receipt of all the lease rentals, the ownership of the vessel is transferred to the lessee.
4. The vessel is leased against an irrevocable, unconditional guarantee from a first-class commercial bank, acceptable to the IDB.
5. The rental fee of the vessel will be payable in six equal monthly instalments. The first instalment will fall due for payment six months after delivery of the vessel.
6. The lessee will be responsible for the vessel's maintenance and successful operation, as well as for other expenses and claims related to the possession of the vessel.
7. The lessee will buy comprehensive insurance policy for the "stipulated loss value" to cover all possible eventualities for the protection of the asset. A copy of the insurance policy will be sent to the IDB. The insurance policy will be effective from the time of the takeover of the vessel until the payment of the last rental instalment. All claims and disputes, etc., would be pursued by the lessee. The insurance company covering the liabilities must be acceptable to the IDB.
8. Corporate taxes, customs duties and other levies, if any, either on the assets or for the operation or the instalments payable to the IDB shall either be borne by the lessee or shall be given exemption by the Government.
9. The vessel will be registered in the name of the IDB in a country decided upon by the IDB and the lessee. The vessel will be named by the lessee in consultation with the IDB.
10. The latest prices of vessels (available for sale) should always be obtained for guidance from the Baltic Exchange, London, or a similar Exchange in the process of procurement.

28. Information from the African Development Bank (ADB) indicated that ship financing for privately owned and managed enterprises could be made available. In this case, an average payment between 5 and 12 years with variable interest rates may be possible, subject to a full analysis of the project and the credit-worthiness of the borrowers.

29. As stated in the report of September 1992, the World Bank group and its affiliates continue to have limited involvement in ship financing.

Annex

Summary table of maritime subsidy measures

Country	Other aids	Maritime Insurance Aids	Research and Development Aids	Cabotage	Government ownership	Customs duty, levies and	Tax and depreciation benefits	Export aids	Scrap and build aids	Bilateral or trade agreements	Cargo preference requirements	Financing programmes	Restructuring aids	Construction subsidies	Operating subsidies
Algeria		X		X	X					X					
Argentina	X	X		X			X			X	X				
Australia				X	X	X	X	X			X	X		X	
Bahamas				X		X									
Bangladesh		X		X	X					X	X				
Belgium	X		X	X	X	X	X	X		X		X		X	
Brazil		X		X	X	X	X	X		X	X	X			
Canada			X	X			X	X	X						
Chile				X	X	X	X			X					
Colombia		X		X											
Côte d'Ivoire	X	X		X	X					X					
Cyprus	X						X								
Denmark	X		X	X	X	X	X	X	X	X		X		X	
Ecuador				X	X						X				
Egypt	X	X		X			X			X					
Finland			X	X		X	X	X		X		X		X	
France	X		X	X			X	X		X	X		X	X	X
Germany	X		X	X	X	X	X	X		X		X	X	X	
Greece	X			X		X	X	X	X			X	X		
Honduras				X						X					
Hungary				X	X										
India	X	X		X	X		X		X	X	X	X		X	
Indonesia	X			X	X	X				X	X				

Country	Other aids	Maritime Insurance Aids	Research and Development Aids	Cabotage	Government ownership	Customs duty, levies and	Tax and depreciation benefits	Export aids	Scrap and build aids	Bilateral or trade agreements	Cargo preference requirements	Financing programmes	Restructuring aids	Construction subsidies	Operating subsidies
Israel	X	X			X		X			X					
Italy	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Japan	X		X	X	X	X	X	X	X	X		X	X	X	
Kenya	X	X			X						X				
Republic of Korea	X		X	X		X	X	X		X	X	X	X		X
Kuwait					X					X	X				
Malta		X			X		X							X	
Mexico	X	X		X	X	X	X			X					X
Morocco	X	X			X		X			X	X			X	X
Myanmar					X						X				
Netherlands	X		X			X	X	X		X		X	X	X	
New Zealand				X			X								
Nigeria	X	X		X		X				X					
Norway	X		X				X			X		X		X	
Pakistan				X	X		X		X	X					
Panama	X				X		X								
Peru	X	X		X			X			X		X		X	
Philippines				X		X	X			X	X				
Poland	X			X	X										
Portugal				X	X		X			X	X			X	X
Romania	X			X	X					X			X		X
Singapore					X										
South Africa								X		X		X			
Spain	X	X		X	X	X	X	X		X	X	X	X	X	
Sri Lanka	X			X	X	X				X		X			

Country	Other aids	Maritime Insurance Aids	Research and Development Aids	Cabotage	Government ownership	Customs duty, levies and	Tax and depreciation benefits	Export aids	Scrap and build aids	Bilateral or trade agreements	Cargo preference requirements	Financing programmes	Restructuring aids	Construction subsidies	Operating subsidies
Sweden				X		X	X			X		X			X
Switzerland	X						X					X			
Taiwan Province of China				X	X	X	X			X	X	X		X	
Thailand				X		X	X			X	X			X	
Turkey				X			X				X			X	
United Kingdom	X			X	X		X			X			X	X	
United States	X			X		X	X			X	X	X			X
Uruguay				X	X	X	X			X	X	X			
Venezuela				X	X					X	X				

Source: United States Maritime Administration, Maritime subsidies, 1993.